

INTERNATIONAL SEARCH REPORT

 Internat. application No
 PCT/GB 03/05125

A. CLASSIFICATION OF SUBJECT MATTER
 IPC 7 601D5/165

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED
 Minimum documentation searched (classification system followed by classification symbols)
 IPC 7 601D

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the International search (name of data base and, where practical, search terms used)

EPO-Internal, PAJ

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	US 2 442 630 A (ARTHUR WICKESSER) 1 June 1948 (1948-06-01) the whole document	1-3
A	EP 0 389 669 A (VDO SCHINDLING) 3 October 1990 (1990-10-03) abstract; figure 5	1,13-15
A	PATENT ABSTRACTS OF JAPAN vol. 2000, no. 01, 31 January 2000 (2000-01-31) -& JP 11 271013 A (UNISIA JECS CORP), 5 October 1999 (1999-10-05) abstract	1,16,17
A	US 5 657 544 A (MURAKAMI TAKU ET AL) 19 August 1997 (1997-08-19) figures	1,18
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☒ Further documents are listed in the continuation of box C.☒ Patent family members are listed in annex.

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- *Y* document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art.
- *&* document member of the same patent family

Date of the actual completion of the international search

3 March 2004

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12/03/2004

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C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	<p>GB 2 236 191 A (HITACHI LTD ;HITACHI AUTOMOTIVE ENG (JP)) 27 March 1991 (1991-03-27) figures</p>	1

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Information on patent family members

International

Application No

PCT/GB 03/05125

Patent document cited in search report		Publication date	Patent family member(s)	Publication date
US 2442630	A	01-06-1948	NONE	
EP 0389669	A	03-10-1990	DE 3910360 A1	04-10-1990
			DE 58902623 D1	10-12-1992
			EP 0389669 A1	03-10-1990
JP 11271013	A	05-10-1999	NONE	
US 5657544	A	19-08-1997	NONE	
GB 2236191	A	27-03-1991	JP 2796372 B2	10-09-1998
			JP 3107552 A	07-05-1991
			DE 4029815 A1	11-04-1991
			US 5070728 A	10-12-1991